First, the 1996 Act does not give State commissions the option to decide whether physical or virtual collocation is desirable as a matter of State policy. As the Commission has noted in its order reviewing petitions for exemption from physical collocation requirements, many States have previously allowed the ILEC to choose whether to offer physical or virtual collocation.[22] Those State policies that require physical collocation at the ILEC's option are inconsistent with the collocation requirements of the 1996 Act. The 1996 Act only allows State commissions to adjudicate the technical feasibility of physical collocation. These mandatory physical collocation requirements of the 1996 Act imply that Congress did not intend to extend a policy role to State commissions for collocation matters.

Second, the Commission's experience with physical and virtual collocation tariffs filed by the ILECs demonstrates that absent a clear national collocation policy, ILECs will engage in practices that are intended to disadvantage competitors who collocate on their premises. For example, when the Commission required that ILECs provide physical collocation and required that they file tariffs, the Commission found evidence of discriminatory pricing (*i.e.*, charging prices for collocation services that were substantially higher than the price charged for comparable special access offerings), discriminatory overhead loadings that were unsupported by cost data and double recovered common costs, and misallocation of general support facilities expenses.[23] Even though the Commission ordered physical collocation and ordered ILECs to file tariffs making such offerings

[22] See the descriptions of State collocation policies in *Expanded Interconnection with Local Telephone Company Facilities and Petitions for Exemption from Physical Collocation Requirement*, Memorandum Opinion and Order, CC Docket 91-141, 8 FCC Rcd. 4569, 4576-4583 (1993).

[23] See the discussion of the host of problems associated with ILEC physical collocation tariffs in *Ameritech Operating Companies Revisions to Tariff FCC No. 2*, Transmittal Nos. 697, 711 *et al.*, Order, CC Docket 92-162, 8 FCC Rcd. 4589 (1993).

generally available, ILECs delayed offering physical collocation in many instances by arguing that it was inconsistent with State policy or by incorporating individual case basis ("ICB") provisions in tariffs which would allow ILECs to discriminate among interconnectors.[24] Simply put, the Commission's past experience with physical collocation is that unambiguous national guidelines are needed to stop ILECs from engaging in discriminatory, potentially anticompetitive practices.

Third, if State commissions determine collocation policies, new entrants will be forced to litigate (and win) collocation cases in at least 51 jurisdictions. Such regulatory litigation raises the costs of entering and competing in the market, and itself constitutes a barrier to entry that frustrates the pro-competition intent of the 1996 Act. State-by-State determination of collocation policies and rights would create a Balkanization of collocation rights and competition.

Fourth, as a purely practical matter, collocation cannot reasonably be jurisdictionalized. It makes no sense to divide a collocation cage or collocation floor space into interstate and intrastate portions. As discussed further below, single rate and set of terms and conditions should apply to all collocation accommodations.

In its Notice, the Commission solicits comments in three major areas: (1) which ILEC premises should be included in collocation requirements; (2) what equipment should collocators be allowed to place in ILEC premises; and, (3) what modifications are appropriate to the collocation policies the Commission developed in its *Expanded Interconnection* proceeding. MFS discusses each of these issues below.

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[24] *Id.*

- **Physical Collocation Should be Required at Any ILEC Premises Where It is Technically Possible (¶ 71)**

In previous proceedings the Commission analyzed collocation in the context of expanded interconnection for special access (*e.g.*, interconnection to provide one channel termination for special access) and the local transport element of switched access. For special access, the Commission required ILECs to make expanded interconnection available in all end offices, serving wire centers, and remote nodes used as rating points for special access.[25] For switched access, ILEC's were required to allow collocation in tandem offices and remote nodes or switches that serve as rating points for switched transport.[26] The 1996 Act does not limit collocation to the provision of particular services, but instead broadly requires "physical collocation of equipment necessary for interconnection and access to unbundled network elements at the premises of the local exchange carrier." Sec. 251(c)(6). In general, the 1996 Act is intended to promote the development of competition in all segments of the telecommunication market, so the Commission should not restrict collocation to collocation for access services, nor should it imply that collocation is limited to ILEC's' central offices.

MFS recommends that collocation be offered at any ILEC premise where physical collocation is technically feasible, including central offices, cable vaults, manholes, cross-connect points, loop carrier, and building closets. If there are space limitations at an ILEC's premise or physical collocation is not technically practical, only then, pursuant to the provisions of the 1996

[25] *Expanded Interconnection with Local Telephone Company Facilities*, Report and Order and Notice of Proposed Rulemaking, CC Docket 91-141, 7 FCC Rcd. 7369, 7417-18 (1992) ("Special Access Collocation Order").

[26] *Expanded Interconnection with Local Telephone Company Facilities*, Memorandum Opinion and Order, CC Docket 91-141, 8 FCC Rcd. 127, 128-129 (1992).

Act, should an ILEC be allowed to impose virtual collocation as a substitute arrangement. Of course, even when physical collocation is technically feasible, a collocator should be free to request virtual collocation in lieu of physical collocation, and should be free to request both physical and virtual collocation in the same office, in keeping with the scheme of Sec. 251(c)(2) under which interconnector is initiated by a carrier's request, not by an ILEC's choice of what to offer. When the Commission ordered physical collocation, only a few ILEC's requested waivers based on claims of insufficient space.[27] Also, since many ILECs have actually provided physical collocation accommodations, physical collocation is obviously technically feasible. Thus, based on this experience, it seems likely that physical collocation will be feasible in the majority of ILEC facilities. Further, the burden of proving any claim of technical infeasibility should fall squarely on the ILEC.

In the Commission's recent Inside Wiring docket,[28] MFS described the difficulties that competitive local service providers have in obtaining access to buildings served by ILECs. In many instances, the ILEC is the only carrier granted access to building inside wiring even though tenants within the building may wish to be served by competitive local service providers. MFS suggested that in instances where nondiscriminatory access to building demarcation points is not possible, ILEC's be required to offer unbundled access to their network elements used to access a building's

[27] *Expanded Interconnection with Local Telephone Company Facilities and Petitions for Exemption from Physical Collocation Requirement*, Memorandum Opinion and Order, CC Docket 91-141, 8 FCC Rcd. 4569 at 4574-4575 (1993). When the Commission ordered physical collocation, Ameritech requested waivers in only 21 of its 286 central offices; Bell Atlantic requested waivers in only 49 of 69 central offices; and BellSouth requested waivers in only 28 of 141 central offices.

[28] *Telecommunications Inside Wiring*, Notice of Proposed Rulemaking, CC Docket 95-184 (released Jan. 26, 1996).

demarcation point. In such instances, physical collocation at an ILEC's premises beyond the central office is critical to promote competition in instances where a new entrant simply cannot obtain access to a building's demarcation point.

- **ILECs Should Not Be Allowed to Restrict the Type of Equipment Used for Physical Collocation or Restrict the Types of Services That May Use Physical Collocation Accommodations (¶ 72)**

Sec. 252(c)(6) does not specify the types of equipment that may be physically collocated at an ILEC's premises. Instead, it requires physical collocation of any form of equipment necessary for interconnection or access to unbundled network elements. The broad mandate of this provision requires that the Commission revise at least two of its major collocation policies.

First, in its *Expanded Interconnection* proceeding, the Commission established a policy that allowed ILECs to restrict collocation to transmission equipment, including multiplexers, optical terminating equipment and microwave facilities, but excluded switches, computers used for providing enhanced services and customer premises equipment.[29] Such a policy limiting the types of equipment that may be collocated at ILEC premises is inappropriate and inconsistent with the 1996 Act's pro-competitive intent. Further, ILECs have interpreted the Commission's equipment restrictions to prohibit interconnections between collocators.[30] Such a policy is anticompetitive and discriminatory as it requires collocators who wish to connect their facilities to collocated customers

[29] For special access collocation and interconnection see *Special Access Collocation Order*, 7 FCC Rcd. at 7413-7414. For switched access, see *Expanded Interconnection with Local Telephone Facilities*, Second Report and Order and Third Notice of Proposed Rulemaking, CC Docket 91-141 Transport Phase I, 8 FCC Rcd. 3374, 7412 (1993).

[30] Attachment 1 hereto is correspondence between MFS and Sprint/United Telephone of Florida that illustrates such restrictions as it expresses an ILEC's corporate collocation policy that restricts MFS from interconnecting its facilities with AT&T (an MFS customer), both of which are collocated in Sprint/United Telephone's central office

to purchase the competing special access offerings of the incumbent provider rather than provide their own (probably far less expensive) connection. MFS urges the Commission to implement policies that eliminate such anti-competitive equipment restrictions.[31]

Second, in the context of its Open Network Architecture ("ONA") and Comparably Efficient Interconnection ("CEI") inquiries, the Commission established policies and rules regarding interconnection of facilities of enhanced service providers with ILEC facilities for the purpose of accessing unbundled network elements that are used by enhanced service providers. The Commission must revise its ONA and CEI rules to be consistent with the interconnection and collocation requirements of the 1996 Act. The Commission should not develop separate collocation rules and requirements for enhanced services both because the distinctions between enhanced services and telecommunications services are disappearing and because ILECs can collocate their own enhanced services.

For example, Bell Atlantic recently filed a CEI plan with the Commission that would provide enhanced service providers with access to the network features used by Bell Atlantic in the provision of Internet service.[32] In its opposition, MFS presented evidence that Bell Atlantic was proposing to offer its Internet service in conjunction with discounted second local telephone lines and in conjunction with long distance service. It is impossible, as a practical matter, to unambiguously

[31] Some ILECs permit interconnection between collocators. For example, New York Telephone recently agreed to allow physical collocators to interconnect directly for exchange of local traffic in order to prevent unnecessary use of its tandem switches that would have otherwise had to handle traffic that neither originated nor terminated on New York Telephone's network. Letter from Maureen Thompson (New York Telephone Legal Department) to John Crary (New York Public Service Commission), filed in NYPSC Case 94-C-0095, dated January 25, 1996.

[32] *Offer of Comparably Efficient Interconnection to Providers of Enhanced Internet Access Services*, CCB Pol. 96-09 (filed Mar. 8, 1996).

determine where Bell Atlantic's Internet service ends and its telecommunications services begin. If Bell Atlantic can collocate the computers and servers it uses to configure its Internet service, then the same collocation rights and access to unbundled network elements should be afforded to other telecommunications providers who wish to provide Internet services. For purposes of developing collocation rules, the Commission should not get mired in policing collocation standards that differ depending on whether an activity is classified as an enhanced service, an access service, a local exchange service, a wireless service or a long distance service.

- **The Commission Must Modify or Address a Number of Collocation Policy Issues That Were Not Addressed by the *Expanded Interconnection* Proceedings (¶ 73**

The Commission seeks comment on whether to simply adopt the prior collocation requirements announced in the *Expanded Interconnection* proceedings, or whether to modify those requirements. The *Expanded Interconnection* proceedings addressed a number of collocation policy issues, but, as enumerated below, there are a number of policies that should be changed.

Under Sec. 252(c)(6), rates, terms, and conditions for collocation accommodations must be "just, reasonable and nondiscriminatory." Under the *Expanded Interconnection* proceeding, the prices that the ILECs actually filed for collocation were grossly at odds with this statutory standard. In the *Expanded Interconnection* proceeding, the Commission directed the ILECs to develop collocation charges, and then justify or defend those charges. Because the collocation pricing standards were very broad, the process failed to yield reasonable collocation prices, terms and conditions, but degenerated into a series of tariff filings, protests and Commission orders designating issues for further investigation. The collocation prices that the ILECs ultimately filed were plagued

with a host of pricing problems including excessive overhead loadings, discriminatory prices for identical services (*i.e.*, higher prices for collocation offerings that were identical to special access services), excessive charges for training, excessive charges for collocation equipment, etc. Indeed, a complete description of all the pricing problems encountered with the ILEC collocation tariffs and the actions taken by the Commission would surely exceed the 120 page limit in this proceeding.

MFS recommends that the Commission establish specific, unambiguous collocation pricing standards and require that the ILECs file tariffs that reflect those pricing standards. Specifically, MFS suggests the following pricing standards:

- **Nondiscriminator prices.** The 1996 Act requires that collocation prices be nondiscriminatory. Collocation prices should be nondiscriminatory with respect to other collocators, with respect to retail telecommunications services and with respect to comparable functionalities the ILEC uses to configure its own services. ILECs should offer a collocation rate that neither advantages nor disadvantages any competitor. As a practical matter, this means that if an ILEC offers a particular collocation rate to one collocator (including its own enhanced service offering), it must offer the same rate to all who wish to collocate. Nondiscriminatory pricing also requires parity between services. One example of discriminatory prices described by the Commission in the *Expanded Interconnection* proceeding was a $5,592 charge for labor, engineering, and equipment testing levied by Bell Atlantic on collocators when it charged $466.05 for comparable special access

services.[33] Nondiscriminatory pricing for collocation also means that ILECs cannot offer collocation to a subsidiary that is more favorable than the collocation offered to a competing firm or the collocation functionalities that the ILEC uses to provision its own services. For example, since collocation accommodations are a fundamental element of the access services that ILECs provide to their customers, a simple discrimination test is that collocation charges should never exceed the tariffed prices for special access circuits.[34] If special access rates cover costs, then the nondiscriminatory price of collocation, which is just a sub-set of the functionality used to provision special access, should be substantially below tariffed special access rates. Likewise, one would expect that the prices for virtual collocation to never exceed the prices for physical collocation since physical collocation should include elements such as area preparation, construction, and design functions that are not included with virtual collocation.[35]

- **No Charges for Unnecessary Functions.** One way in which charges for physical collocation were inflated under the Commission's former rules was the imposition of excessive charges for unnecessary functions, such as the construction of wire "cages" to segregate

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[33] *Local Exchange Carriers' Rates, Terms, and Conditions for Expanded Interconnection Through Virtual Collocation for Special Access and Switched Transport*, Order Designating Issues for Investigation, CC Docket 94-97, Phase II, 10 FCC Rcd. 11116, 11121 (1995) ("*Designation Order*").

[34] The ILECs' collocation prices filed in the Expanded Interconnection docket, however, often did exceed their special access rates, which presumably bundled the collocation accommodations with access facilities. See *Ameritech Operating Companies Revisions to Tariff FCC No. 2*, Transmittals 697, 711 *et al.*, Order, CC Docket 93-162, 8 FCC Rcd. 4589, 4592-4593 (1993).

[35] The ILEC virtual collocation prices, however, did exceed their physical collocation prices. See *Local Exchange Carriers' Rates, Terms and Conditions for Expanded Interconnection for Special Access*, Order Designating Issues for Investigation, CC Docket 93-162, 8 FCC Rcd. 6909, 6910 (1993).

interconnectors' equipment from the rest of the central office (sometimes at a price exceeding the cost of a typical single-family home). In MFS' experience, "cages" are often not necessary, and the ILEC's should not be permitted to impose charges for such enclosures, for unused and unneeded floor space within such an enclosure, or for any other additional construction or modification of the central office building, unless this work is voluntarily requested by the interconnector.[36]

- **Provisioning Charges Should be Cost Based but Generally Uniform Among ILECs.**

As the Commission has observed, there is considerable variation among ILECs in the charges associated with collocation service order processing and design engineering.[37] These provisioning charges range from $181 to $3,600. The provisioning activities of ILECs are largely identical, so such wide variations obviously do not reflect "just and reasonable" differences in costs. MFS recommends that the Commission set collocation provisioning charges at the lowest provisioning charge presently on file with the Commission and require that ILECs who wish to charge a high rate present evidence demonstrating that their costs are higher than the baseline rate. An ILEC with costs of $3,600 might argue that these are its actual provisioning costs. However, a collocator should not be forced to pay for an ILEC's inefficient, costly provisioning processes. Since provisioning is largely similar among ILECs, it is reasonable that ILECs be held to the lowest charges of the most efficient ILEC.

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[36] Central office equipment areas are generally secured as a matter of course by the ILEC, so that construction of a "cage" is not necessary to protect the interconnector's equipment against access by unauthorized persons. In the absence of a physical enclosure, the ILEC can simply place the interconnector's equipment on a designated equipment rack within the ILEC premises, eliminating the need for permanent occupation of floor space (and corresponding per-foot rental charges). This approach gives the ILEC greater flexibility in the use of its own premises and reduces the cost of physical collocation for the interconnector.

[37] *Designation Order*, 10 FCC Rcd. at 11123.

- **Collocation Charges Should be Set at the Incremental Cost of Collocation.** In describing "just and reasonable" interconnection charges and charges for access to unbundled network elements, the 1996 Act requires that such rates shall be "based on the cost (determined without reference to a rate-of-return or other rate-based proceeding) of providing the interconnection or network element" and "may include a reasonable profit." Sec. 252(d)(1). The same pricing standard should apply to "just and reasonable" charges for collocation for interconnection and access to unbundled network elements, since collocation is simply one means of providing such interconnection and access. Prices set at incremental costs (which include a return to the capital facilities used to provide the service) meet this statutory standard. Prices designed to provide contribution or produce a particular revenue requirement do not meet this statutory standard. Similarly, collocation charges that differ by jurisdiction (*e.g.*, higher intrastate collocation charges than interstate collocation charges), or differ by state, or differ by zone density, or differ among ILECs where such differences have no basis in costs cannot be considered "just and reasonable" under the 1996 Act.

Collocation accommodations are used for equipment and traffic that may support interstate, intrastate and international communications. There is no unambiguous method for precisely apportioning collocation accommodations between jurisdictions, however, there are substantial differences between interstate and intrastate charges for collocation accommodations. Obviously, even though there are differences in the interstate and intrastate prices for various collocation accommodations, there is no difference in cost. Electric power costs are the same irrespective of the fact that interstate charges for such power are often far lower than intrastate charges. Ideally, there

should be no difference between interstate and intrastate collocation charges. Arguably, higher intrastate charges for collocation accommodations that have no basis in economic costs are unjust and unreasonable and should not be allowed under the 1996 Act. MFS encourages the Commission to embrace policies that eliminate such artificial, non-cost based price differences and require parity of interstate and intrastate collocation charges.

In lieu of a parity policy, because special access circuits present the same jurisdictional issue (*i.e.*, special access circuits may be used for local, interstate, intrastate or international traffic but traffic flows are not monitored), the Commission could generally apply the same jurisdictional rules to collocation accommodations that apply to special access circuits. That is, if 10% or more of the traffic supported by the collocation accommodations is interstate in nature, then the collocation accommodations should be considered entirely interstate and interstate rather than intrastate charges should apply. *See also* page 50 below

The price of collocation accommodations should reflect the incremental costs of providing collocation accommodations. The pricing policies established in the *Expanded Interconnection* proceeding do not reflect incremental costs, but rather, are a form of fully distributed cost-based pricing that allocates a share of common and overhead costs to collocation offerings. By definition, incremental costs are the change in total costs that are caused by the activity in question. If the ILEC's total costs are unaffected by physical collocation (*e.g.*, a collocator uses floor space or rack space that would be vacant but for the collocation), then there are no incremental costs associated with the collocation and the collocation price should be zero. Said differently, if an ILEC recovers

its costs and earns a "just and reasonable" return without renting its unused space to a collocator, then any charge for unused, unoccupied space is a windfall for the ILEC.

Incremental cost-based collocation prices will not include contribution, nor should incremental cost-based collocation charges include overhead loadings or a share of common costs. Unless such common costs are increased by collocation, they are not part of the incremental costs of collocation. ILECs currently recover their common costs through their existing rate structures without offering collocation. If those common costs are unaffected by offering collocation, then there is no policy reason for allocating such costs to collocation. As the Commission experienced in the *Expanded Interconnection* proceeding, double recovery of common costs is a likely result of allowing ILECs to recover common and overhead costs from collocators[38] and the Commission will be doomed to resolving an endless cycle of disputes about whether the appropriate share of common or overhead costs were allocated to collocation charges.

- **Physical and Virtual Collocation Accommodations Should be Available on a Tariffed Basis.** In the *Expanded Interconnection* proceedings, the Commission required ILECs to provide collocation on a tariffed basis. The same policy should be extended to collocation under the 1996 Act. Some ILECs are attempting to delay interconnection by asserting that collocators must negotiate and execute separate collocation agreements for all offices where they wish to collocate.[39]

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[38] See, for example, *Local Exchange Carriers' Rates, Terms and Conditions for Expanded Interconnection for Special Access*, Order Designating Issues for Investigation, CC Docket 93-162, 8 FCC Rcd. 6909, 6913 (1993)

[39] For example, Attachment 2 hereto is correspondence between MFS and U S West, demonstrating U S West's obvious intention to abuse the negotiation process to delay implementing physical collocation for as long as it possibly can.

The Commission should require all ILECs to file physical and virtual collocation tariffs immediately in order to stop this anticompetitive practice.[40]

- **Virtual Collocation Policies Governing Charges for Interconnector Designated Equipment Should be Uniform.** In the *Expanded Interconnection* proceeding, the Commission gave interconnectors the right to select the type of central office equipment dedicated to their use in virtual collocation arrangements and generally required that ILECs provide such equipment at rates based on the direct cost of such dedicated equipment.[41] As the Commission noted, most ILECs permit collocators to buy interconnection equipment from various vendors, then lease the equipment from the collocator for a nominal amount (*e.g.*, $1), and make the equipment available to the collocator. Such a policy allows collocators to obtain interconnection equipment from vendors at volume discounted rates and to redeploy such equipment in their network as they expand. Southwestern Bell, however, refuses to implement such a policy as MFS and others have complained to the Commission on numerous occasions. The Commission can end this controversy simply by ordering that all collocators may buy interconnection equipment from the ILEC at the ILEC's tariffed rates or lease desired equipment to the ILEC for a nominal amount consistent with the practices adopted by virtually all ILECs.

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[40] Since some interconnectors may request virtual collocation, and in other instances ILECs may be able to demonstrate space limitations that preclude physical collocation, the Commission's rules in this docket should address issues relating to both physical and virtual collocation.

[41] *Designation Order*, 10 FCC Rcd. at 11119. A major distinction between physical and virtual collocation is control or ownership of collocation equipment. In a physical collocation situation, the collocator owns the collocation equipment and typically controls its installation. In instances of virtual collocation, the ILEC owns the collocated equipment and may control its installation, maintenance and repair.

- **Virtual Collocation Charges for Installation, Maintenance and Repair of Collocator-Designated Interconnection Equipment Should be Cost-Based but Generally Uniform Among ILECs.** ILEC charges for installation, maintenance and repair of collocator-designated interconnection equipment vary widely even though the activities performed by BellSouth, for example, with respect to MFS-provided Fujitsu equipment are identical to those performed by Ameritech. The Commission should require that ILECs charge identical rates for installation, maintenance and repair of collocator equipment except to the degree that they can establish that their labor costs differ. For example, the Commission should establish the lowest installation, maintenance and repair labor charges for collocator-designated equipment as the baseline charge. ILECs can levy a higher charge only if they can demonstrate that their labor costs are higher than the baseline.

- **No Limits on Collocation Space Unless There Is a Demonstrated Need.** There should be no provision in ILEC collocation tariffs restricting the amount of space (floor or rack) that may be occupied by an interconnector's equipment, unless and until the ILEC demonstrates that collocation space in a particular premise is nearing exhaustion. Realistically, no space limitation (such as the 400 square-foot limits found in some ILEC tariffs) is required in most cases, since so much space is available in most central offices that it would take several years for a space-exhaust situation to develop. To limit parties from "warehousing" collocation space that is not used in those offices where space is limited, however, MFS suggests that a formula be used to assess whether additional collocation space is required. An outline of the collocation expansion formula was

presented to the Commission staff in an *ex parte* presentation.[42] If collocation space is unused for more than 180 days, the ILEC should be allowed to reclaim the space only if the collocator has not paid for the collocation accommodations and the unused space is needed to serve the immediate needs of another collocator or the ILEC's customers.

- **The Commission Should Establish Uniform Installation, Maintenance and Repair Intervals.** In its review of ILEC collocation tariffs, the Commission discussed how ILECs set installation, maintenance and repair intervals for high-capacity customers (e.g., DS3 and DS1 customers), but do not set such intervals for collocators with whom ILECs compete.[43] The Commission, as it indicated in its Designation Order, should require that ILECs state in their collocation tariffs:

  (1) The frequency with which they will perform maintenance and repair of interconnector-designated equipment;

  (2) The maximum response time to intermittent service outages; and,

  (3) The restoration priorities if a LEC's wire center is inoperative.[44]

The same time intervals that apply to other, comparable ILEC-provided services and equipment should apply to collocation equipment and services. MFS suggests requiring ILECs to provide reports showing failures per 100 circuits for both ILEC and collocator circuits as a mechanism to discourage discrimination. It is also important that ILEC collocation tariffs explicitly describe installation, maintenance, repair and construction intervals. Without enforceable, explicit

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[42] MFS Communications, *ex parte* submission in CC Dockets 91-141 and 94-97, Phase II, "MFS Responses to Collocation Issues raised at March 8, 1996 Meeting" (filed Mar. 21, 1996).

[43] *Designation Order*, 10 FCC Rcd. at 11130-11131.

[44] *Id.*, 10 FCC Rcd. at 11131.

intervals, ILECs can stymie interconnecting competitors simply by delaying critical installation, repair or construction activities. MFS recommends that the Commission require all ILECs to specify intervals in their collocation tariffs.

Intervals must be based on reasonable, good-faith estimates of the time required to perform the necessary work. For example, the time intervals for expanding physical collocation space should be less than the time intervals for initially preparing space for physical collocation. In any case, time intervals for expansion should never exceed 90 days.

c. Unbundled Network Elements (¶¶ 74-80)

MFS agrees with the tentative conclusions in paras. 77 and 78. But, the fact that the Commission identifies a minimum set of network elements that ILECs must unbundle should not preclude or erect any presumption against a carrier's request that additional elements be unbundled.

(1) Network Elements (¶¶ 81-85)

MFS supports an expansive and flexible definition of "network element," as suggested in para. 83. As discussed in Part I of these comments, a flexible definition is essential to accommodate the inevitable future development of telecommunications networks and technology. Further, network elements must be defined in terms of network capabilities, not in terms of particular ILEC services or service element. The definition in Sec. 3(29) expressly states that a "network element" is a "facility or equipment used in the provision of a telecommunications service[,]" and "includes features, functions, and capabilities that are provided by means of such facility or equipment[.]" Thus, a network element is the underlying facility, equipment, or capability, not limited by the particular use to which the ILEC puts it. If, for example, the ILEC network contains copper loop

facilities that are capable of prov ding (or being conditioned to provide) ISDN service to a particular customer premise, the ILEC h s an obligation to provide unbundled access to those facilities *regardless* of whether the ILEC tself offers ISDN service at that location.[45] In the sections below, MFS identifies several specific r etwork elements that ILECs should, at a minimum, be required to make available on an unbundle basis.

The Commission notes n para. 85 that Sec. 252(d) provides different pricing mechanisms for resale and for unbundling, a id asks whether unbundled elements under Sec. 251(c)(3) may be used by new entrants as "an a ernative way to 'resell' the services of ILECs in addition to the specific resale provision in sub section (c)(4)?" MFS believes that the adoption of very distinct pricing methodologies for resale and for unbundled network elements makes it clear that Congress did not intend for subsection (c)(3) to serve as a means for non-facilities-based carriers to obtain at a lower price than is available under subsection (c)(4) service that is *entirely* provided by the incumbent.

In Sec. 252(d), Congres directed the use of a pricing methodology for resold services in which avoided costs are subtract d from retail rates, but directed that unbundled network elements, by contrast, be priced based upo their cost. Generally, the pricing methodology provided under the

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[45] Para. 84 also suggests in passing that a purchaser of an unbundled facility may have an "obligation" to provide all of the services that the ILEC currently provides using that network element. Sec. 251(c)(2) does not, however, speak of any such obligation, although it refers to a "telecommunications carrier" w hich implies that general common carrier obligations apply. MFS believes that the obligation of a elecommunications carrier is limited to offering those services that it holds itself out as offering, an d is not defined by the services that an ILEC offers. *See National Ass'n of Regulatory Utility Com'rs v. FCC*, 525 F.2d 630, 645 (D.C. Cir. 1976) ("business may be turned away either because it s not of the type normally accepted or because the carrier's capacity has been exhausted").

resale provisions of the 1996 Act will result in somewhat higher prices, because it preserves for the incumbent the contribution inherent in the incumbent's retail rates. This perhaps reflects Congress's view of the limited contribution resellers make to the eventual service offering—a contribution that generally involves nothing more than the reseller taking over certain of the ILEC's billing and collection, marketing and customer service functions. By contrast, under the unbundling provisions of the 1996 Act, network elements are priced at cost to reflect the contribution of co-carriers that add their own network elements to the ILEC's unbundled components, and thereby incur additional risk and expense. The 1996 Act encourages facilities-based competition by reserving the potential for higher margins for those carriers that incur the risk of investing in the local network and constructing and operating their own facilities.

The proposal, which as the *NPRM* notes, was first made in Illinois,[46] that an entrant be permitted to use the unbundling provisions of the 1996 Act to purchase the *entire* LEC network, piece by piece, cannot be allowed to override the resale pricing methodology established by Congress for non-facilities-based carriers. Accepted canons of statutory construction require that both the resale and the unbundling provisions be given meaning.[47] Permitting a non-facilities-based carrier to repackage the ILEC's retail offerings under the cost-based rates provided for unbundled elements would subvert the resale pricing mechanism of the 1996 Act. If the "Illinois" concept were accepted, every would-be reseller, rebrander or refiler would opt for it, securing cost-based pricing for resold service, and rendering nugatory the resale pricing provisions of the 1996 Act. Facilities-

[46] As of this date, the Illinois Commerce Commission has not ruled on this proposal, which has been vigorously opposed by MFS and a number of other carriers.

[47] *See* note 10, above.

based competition would likel be destroyed, in plain contradiction of Congressional intent. Resellers would obtain all the b nefits of cost-based access to network elements, but would incur none of the risks and costs assoc ated with investment in network facilities and actual operation of a network.

The Commission's discu sion in the *NPRM* of the purpose of the unbundling provisions of the 1996 Act makes it clear that the "Illinois" proposal is not consistent with that purpose. As the Commission observed, the purpo se of these provisions was to ensure that new entrants "can purchase access to those network element that they do not possess, *without paying for network elements that they do not require*."[48] Consi tent with the Commission's view, there is simply no need for unbundling if the new entrant p ssesses *none* of the needed elements, and thus has *no* unrequired elements.

Moreover, as the Commi sion noted in support of its interpretation of the 1996 Act, Congress explained that the unbundling pr visions served the "critical function" of enabling new entrants to avoid purchasing unneeded ele nents because (in the words of Congress) "*[s]ome* facilities and capabilities . . . will likely nee to be obtained from the incumbent [LEC] as network elements

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[48] Para. 75 (emphasis adde). This explanation of the purpose of the unbundling provisions is fully consistent with the Commi sion's use of the "unbundling" concept in prior proceedings. *See Local Exchange Carriers' Rate Terms, and Conditions for Expanded Interconnection Through Virtual Collocation for Special ccess and Switched Transport*, 10 FCC Rcd. 11116 at ¶ 57 (FCC 1995) (purpose of unbundling is to ensure that interconnectors are not forced to pay for services that they do not need"); *Application of Open Network Architecture and Nondiscrimination Safeguards to GTE Corporation*, 9 FCC Rcd 4922 at ¶ 3 (FCC 1994) (purpose of unbundling is to ensure that entrants "are able to purchase only the functionalities that they need"). The Commission's prior interpretation of the concept of unbundling presumably informed Congress' use of the term "unbundled" in subsection 252( )(3).

pursuant to new section 251."[49] This quotation from Congress's Joint Explanatory Statement makes it clear that Congress anticipated the unbundling provisions would be used by new entrants to acquire "some," but not "all," of the needed facilities and capabilities from the incumbent, with new entrants furnishing the balance themselves.[50] It follows from this that for new entrants that choose to furnish *none* of the facilities themselves, Congress provided not the unbundled elements option of Sec. 251(c)(3), but the resale option of Sec. 251(c)(4).

Finally, allowing carriers to purchase the functional equivalent of resold service by purchasing every network element required to provide service would eviscerate the joint marketing restriction in Sec. 271(e)(1). That section forbids the joint marketing of long distance and resold local service purchased under Sec. 251(c)(4). No similar restriction exists for facilities-based carriers that use unbundled network elements purchased under Sec. 251(c)(3), again evidencing both Congress's preference for facilities-based competition and its intention that these two provisions were not to be interchangeable. If the Commission were to sanction the use of unbundled elements as a substitute for resale, the carrier utilizing such elements would technically be considered a facilities-based carrier that is not subject to the joint marketing restriction. AT&T, MCI and Sprint would then be able to market long distance service and a resold local service look-alike jointly, in violation of congressional inten

[49] S. Conf. Rep. No. 104-230, 104th Cong., 2d Sess. 148 (quoted in *NPRM*, para. 75, n.103).

[50] Since the quoted legislative history establishes that Congress did not intend to provide unbundled elements to carriers that needed *all* the elements, the fact that a carrier that purchases all the unbundled elements necessary to offer local exchange service can also use the same elements in the provision of interstate switched access is irrelevant.

(2) Access to Network Elements (¶¶ 86-91)

MFS supports the interpretations and tentative conclusions in paras. 86-87. The standards for access to network elements, including the identification of "technically feasible points" for access, should closely parallel the standards for interconnection. *See* pages 15-18, above. The physical and technical requirements for interconnection and access to network elements are virtually identical.[51] As in the case of interconnection, requesting carriers should be entitled to damages for an ILEC's failure to comply with installation and service quality requirements.[52] Also, because Sec. 251(c)(3) requires that unbundled access be provided on terms that are "nondiscriminatory," the same considerations discussed above in the context of nondiscriminatory interconnection should apply.

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[51] "Interconnection" is an arrangement provided for the transmission and routing of telephone exchange service and exchange access service," Sec. 251(c)(2)(A), and is a peer-to-peer relationship; that is, one carrier's responsibility for traffic ends at the point of interconnection, and the other's begins. Unbundled access, however, is a buyer-seller relationship: the requesting carrier purchases access in order to incorporate ILEC network elements into its own network. In this context, the requesting carrier has end-to-end responsibility for the service it provides to its user, even when using ILEC network elements to provide the service. The distinction between the two, then, centers on the purpose for which the facilities are being used, although the technical characteristics of the facilities and the connections between them will be extremely similar. Congress recognized this parallelism in adopting very similar provisions governing interconnection and unbundled access; *see, e.g.*, Sec. 251(c)(6) and Sec. 251(d)(1).

[52] For example, the California Public Utilities Commission recently approved a co-carrier agreement between MFS and Pacific Bell under which Pacific Bell is required to pay damages of $7,500 per day if it fails to meet certain standards for installation of unbundled loops. Commission Resolution T-15824 (Cal. PUC Jan. 17, 1996).

(3) Specific Unbundling Proposals

(a) Local Loops (¶¶ 94-97)

MFS strongly supports the Commission's tentative conclusion to require unbundling of the local loop. As correctly noted in para. 94, the local loop was specifically identified by Congress, both in the Joint Explanatory Statement and in the text of Sec. 271(c)(2)(B), as a network element that should be unbundled. Although the loop is by no means the only ILEC network element to which competitors will desire unbundled access, in MFS' experience it is the most critical one. Because duplication of ILEC loop networks is the most formidable obstacle to entry in the local exchange market, the loop has by far the strongest "bottleneck" characteristics of any element of the ILEC network.[53] The Commission's minimum unbundling policy should therefore focus most intently on the rates, terms, and conditions for access to unbundled loops.

The Commission identifies in paras. 95 and 96 a number of potential technical issues regarding loops. MFS urges the Commission to prescribe certain minimum technical and operational standards to avoid future "complex and resource-intensive" disputes. First, ILECs should be required to provide unbundled access to any available loop facilities in their networks. The ILEC

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[53] MFS, by independent estimates, has the most extensive competitive access facilities network in the country and serves far more buildings than any other competitive access provider. Connecticut Research Report, *1995/96 Local Telecommunications Competition*, Table II-3 (1995). Nonetheless, MFS expects to serve more switched local exchange customers over unbundled loops than over its own network, because construction of competitive loop networks in low-density areas simply does not make economic sense with existing technologies. Although some observers have touted cable television or wireless technologies as substitutes for the local loop, neither of these approaches is in significant use today despite years of development. A genuine substitute for the ILEC loop is apparently still several years away; yet Congress clearly was thinking in terms of introducing facilities-based competition within months, not years, when it drafted Sec. 271. The only way to meet that schedule is by unbundling the local loop.

should not be permitted to restrict other carriers to a subset of loop facilities or to dictate the particular type of facilities that can be accessed by other carriers. As the Commission suggests in para. 95, a simple requirement that ILECs must "provide at central offices individual transmission links to customer premises regardless of the technology involved" would prove inadequate in practice. In fact, not all ILEC transmission facilities are capable of supporting all services. Some "digital loop carrier" systems, which combine a number of loop transmission paths over a single digital transport facility, may work well for simple voice service but are inadequate for advanced services such as ISDN. When an ILEC receives an order for ISDN or another service with specialized transmission requirements, it does not simply use whatever facilities happen to be in place "as is," but instead locates available facilities (typically end-to-end metallic circuits) that either satisfy the specific transmission specifications for ISDN or can be upgraded to meet those specifications. In order to satisfy the requirements of Sec. 251(c)(3), an ILEC that makes such upgraded loops available for its own use must also provide unbundled, "nondiscriminatory access" to them for other carriers' use.

At a minimum, where facilities exist within the ILEC network that are capable of meeting (or being upgraded to meet) the applicable standards, each ILEC should be required to offer the following five categories of loops[54]:

[54] In this context, the local loop includes the Network Interface Unit, drop wire, transmission media (usually copper wire) that may be further subdivided into feeder and distribution facilities, support structures, all intermediate cross-connections, loop electronics (if appropriate), MDF termination, central office power and cross-connection to the point designated by the new entrant. It also may include house and riser cable (see page 23, above). These components of the local loop may themselves also be network elements.

- "2-wire analog voice grade links" and "4-wire analog voice grade links" will support analog transmission of 300-3000 Hz, repeat loop start, loop reverse battery, or ground start seizure and disconnect in one direction (toward the end office switch), and repeat ringing in the other direction (toward the End user). These links are commonly used for local dial tone service.

- "2-wire ISDN digital grade links" will support digital transmission of two 64 Kbps bearer channels and one 16 Kbps data channel. This is a 2B+D basic rate interface Integrated Services Digital Network (BRI-ISDN) type of loop which will meet national ISDN standards.

- "2-wire CSA links" are single-pair twisted copper links without load coils which conform to Carrier Serving Area (CSA) design rules, a subset of the Revised Resistance Design (RRD) rules defined in Bellcore SR-TSV-002275.[55] This type of loop meets emerging standards for high-bit-rate digital subscriber line services.

- "4-wire CSA links" are two-twisted-pair copper links without load coils which conform to the CSA design rules described above.

Second, all transport-based features, functions, service attributes, grades-of-service, and installation, maintenance and repair intervals that apply to ILEC bundled local exchange service should apply to unbundled links using the same class of loops in the same geographic area. Since the facilities used in providing an unbundled loop are precisely the same as those used in providing basic local exchange service, there is no justification for providing any lesser quality or functionality or slower installation or repair for unbundled loops than for bundled ones. In the case of an ISDN or CSA loop, the comparison would be to the ILEC's installation interval for end-user services using the same type of loop.

Third, ILECs should be required to permit any customer to convert its bundled service to an unbundled service and assign such service to a competing carrier, with no penalties, rollover,

[55] *See* Technical Report No. 28. *A Technical Report on High-bit-rate Digital Subscriber Lines*, Committee T1-Telecommunications, February 1994.